Evaluation of Anti-Bacterial Effects of Fetal Membranes and a Comparison with the Antibacterial Effects of Some Common Antibiotics

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Background & Objectives: The spread of antibiotic resistance has brought forward a reason for studying alternative biological compounds. The limited studies conducted on fetal membranes have proposed some evidence of their antibacterial properties.The present study aimed to assess anti-bacterial properties of chorionic membranes in comparison with the effects of some common antibiotics.

Methods: After spreading plates of species *Escherichia coli*, *Streptococcus pyogenes*, *Shigella flexneri, Staphylococcus aureus, Bacillus cereus, Klebsiella pneumoniae and Pseudomonas aeruginosa*, amniotic membranes and chorioamniotic membranes isolated from 24 healthy women who had given birth to a way of cesarean section were put on the plates. Also Antibiogram disks as positive control and the cord tissue as negative controls were used. After 24 h incubation at 37 ° C, the halo of growth around the membranes and antibiotic disks were studied and compared the results.

Results: Antibacterial effects were found for chorionic membranes as halo of lack of bacterial, while for the same bacterial strains, apparent antibiotic resistance was revealed. Most anti-bacterial effects on the fetal membranes were shown for *Streptococcus pyogenes, Staphylococcus aureus and Bacillus cereus*. However, no halo of growth inhibition was observed for the bacterium *Escherichia coli.*

Conclusion: This study confirms that in some cases the fetal membranes are capable to compete with anti-bacterial effects of some common antibiotics. So, the idea of using these membranes as a valuable supplement to antibiotics in order to expedite the treatment of dermal infections and infected wounds are strongly suggestive.

Keywords: Chorionic Membranes; Anti-Bacterial Effects; Antibiotic Alternatives